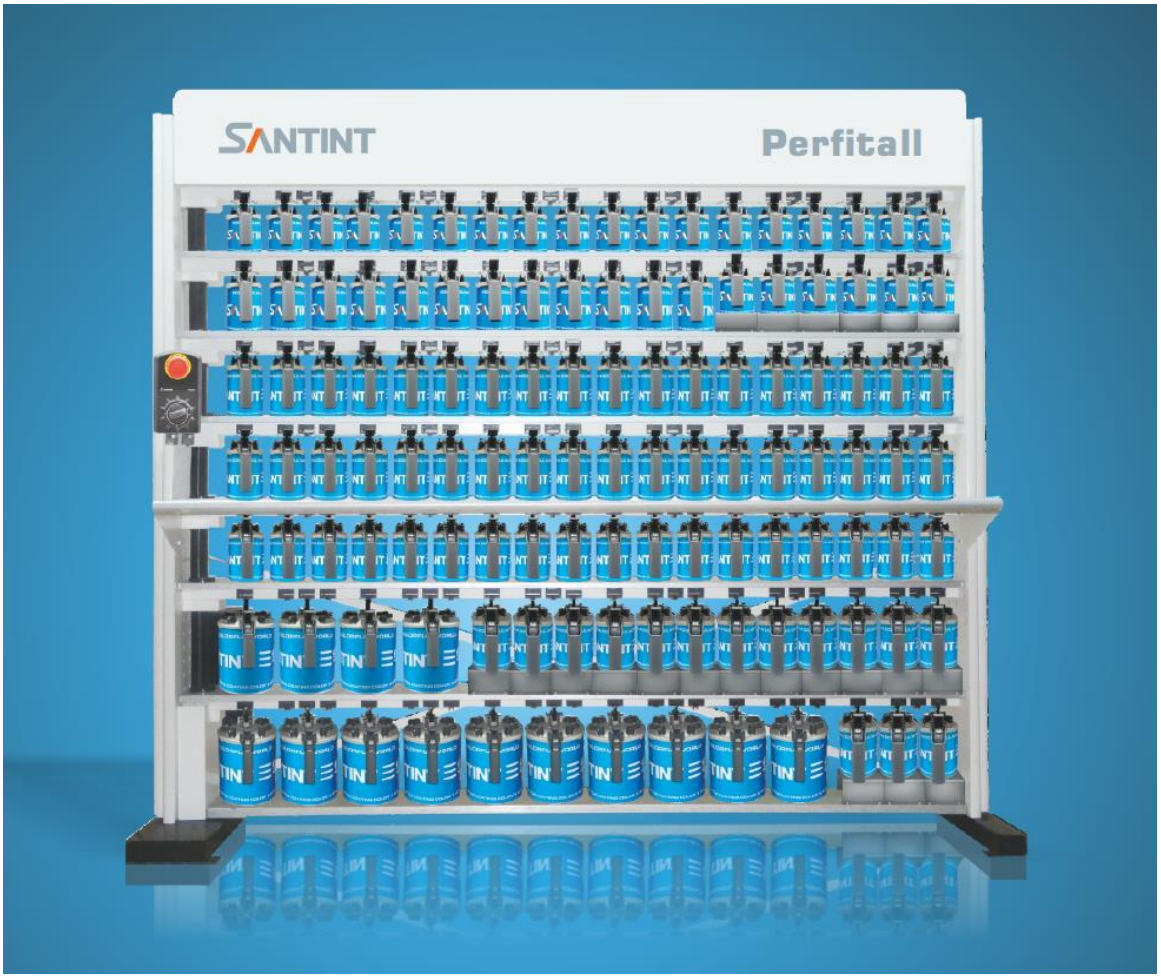
SANTINT 三华




# PA Series Paint Mixing Machine
# User Manual

Please read this manual carefully prior to operation.

© 2010 All Rights Reserved. Zhengzhou Sanhua Technology & Industry Co., Ltd.

**Disclaimer**

All parts of the manual are protected by the copyright law. No part of the manual may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of Zhengzhou Sanhua Technology & Industry Co., Ltd. The company will not be responsible for the technical, editorial errors or omissions of the manual. And will not be responsible for the damage caused by accident or derivation because of supplying the material or characteristics or use of the product as well.

The product information of Zhengzhou Sanhua Technology & Industry Co., Ltd. provided by the user's manual is for customer's use only. Nobody can use the information for other use without the prior written permission of Zhengzhou Sanhua Technology & Industry Co., Ltd.

To keep the interests of ongoing product improvement, Zhengzhou Sanhua Technology & Industry Co., Ltd. will reserve the rights to alter the product specifications without informing the customers. The company will not inform the customers if there is alteration of information in the document.

We attempt to assure the rightness and integrity of the contents during compiling the user's manual of the product, however we cannot guarantee that there are not any errors or omissions in the user's manual. If you have any problems during the process of the product installation, operation and use, please contact Zhengzhou Sanhua Technology & Industry Co., Ltd.

The users can select the product configuration according to the self's needs. Meanwhile, the sales team and training engineers of Zhengzhou Sanhua Technology & Industry Co., Ltd. will assist the users to choose the best configuration with great effort.

# International Quality System Certification

中质协质量保证中心

质量管理体系认证证书

注册号：00610Q20208R2M

兹证明

郑州三华科技实业有限公司

GB/T19001-2008/ISO9001:2008

涂料泵、泵盖、调色机、混匀机油漆调色系列产品的设计、制造和服务

本证书有效期：2010年2月4日至2013年2月3日

中质协质量保证中心

代表签字：

颁证日期：2010年2月4日

Quality Assurance Centre of China Association for Quality

CERTIFICATE OF QUALITY MANAGEMENT SYSTEM

Certificate No. 00610Q20208R2M

This is to certify that the Quality Management System of

Zhengzhou Sanhua Technology & Industry Co., Ltd.

Address: Xinbei Industrial & Trading Park, Zhongyuan West Road, Zhengzhou City, Henan Province, People's Republic of China

Post Code: 450042

is in conformity with

GB/T19001-2008/ISO9001:2008

This certificate is valid in the following scope:

Design, Manufacture and Services to its Series Products-Paint Mixing and Dispensing Machines Such as Paint Mixing Machine and Mixing Lids for Car refinishes, Dispenser, Shaker and Mixer for Decorative Paint

Term of validity of this certificate from: 4th Feb.2010 to 3rd.Feb.2013

Quality Assurance Centre of China Association for Quality

Representative

Hong Jiefu

General Manager

Issue Date: 4th Feb.2010

# Contents

1. Introduction ..... 1
1.1. Product ..... 1
1.2. Safety Instruction ..... 1
2. Circuit Diagram ..... 1
3. Appearance and Technical Parameters ..... 2
3.1 Appearance ..... 2
3.2 Technical Parameters of PA Series ..... 2
4. Setup Preparation ..... 2
5. Setup ..... 3
5.1 Spare Parts ..... 3
5.2 Setup Process ..... 3
5.3 Installation Process of Optional Parts ..... 10
5.3.1 Platen ..... 10
5.3.2 Left/Right Hanging Plate ..... 11
5.3.3 Back-storing Shelf and Mica Shelf ..... 12
6. Usage ..... 13
6.1 Check-up Before Usage ..... 13
6.2 Operation ..... 14
7. Troubleshooting ..... 14
8. Repair ..... 15
8.1 Tension the chain. ..... 15
8.2 Replace the Spring Pin and Jackscrew. ..... 15
8.3 Replace the Plastic Cone-Gear Assembly ..... 16
9. Maintenance ..... 16
9.1 Dalily Maintenance ..... 16
9.2 Periodical Maintenance ..... 16
9.3 Maintenance for Long Time No Use ..... 16
10. Nameplate ..... 17

# 1. Introduction

## 1.1. Product

PA series paint mixing machines are used for auto-refinishing paint. They are equipped with mixing lids and rotary paddles for paint mixing.

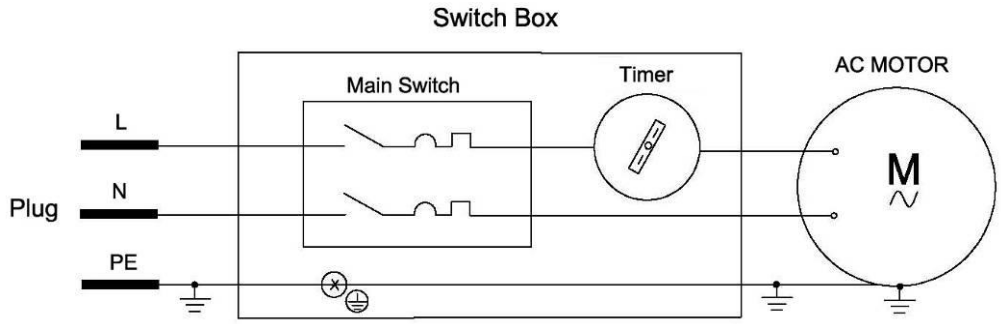
PA series paint mixing machines are mainly for auto-refinishing store; 4S shop; etc.

## 1.2. Safety Instruction

**Read this Safety Instruction carefully prior to operation.**

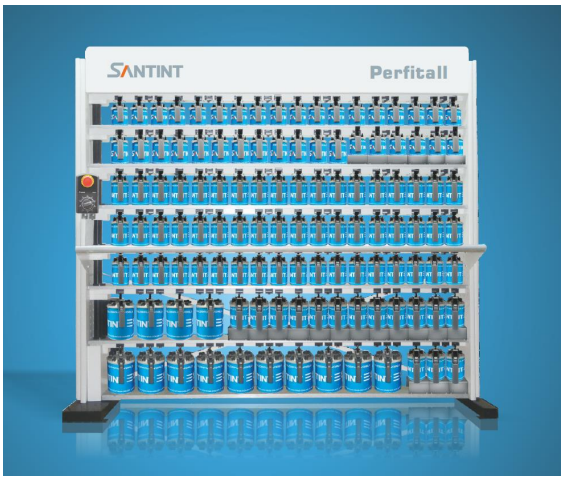
1）Do not let children near the machine.
2）The machine must be placed in dry and well-ventilated space, kept far away from the any heat source (flammable gas).
3）The machine installation shall be in line with the local regulations and properly grounded. Do not lengthen the power chord.
4）Do not clean the machine with flammable materials.
5）Do not use this machine to mix any products other than intended paint.
6）The machine should be stored in dry and well-ventilated warehouse away from any corrosive substances.

# 2. Circuit Diagram



# 3. Appearance and Technical Parameters

## 3.1 Appearance




## 3.2 Technical Parameters of PA Series

| PA Mixing Machine | NO. of Cans at Each Shelf | Mixing Speed （RPM） | Dimension （Standard Configuration） |
|---|---|---|---|
| 6 Series | 6 large/9 small | 72 | 1360 X 700 X 2117 |
| 8 Series | 8 large/12 small | 72 | 1720 X 700 X 2117 |
| 10 Series | 10 large/15 small | 72 | 2080 X 700 X 2117 |
| 12 Series | 12 large/18 small | 72 | 2440 X 700 X 2117 |

# 4. Setup Preparation

**Keep this manual at hand for future use.**

1） The paint mixers are delivered in sets. It might be packed in several cartons or in one carton.

2） Follow the installation procedures listed in the manual.

3） Open the motor package, take out the tools and spare parts as well as the technical documents such as the user manual and the packing list. Check the packed goods with the list. If there is any issue, contact us.

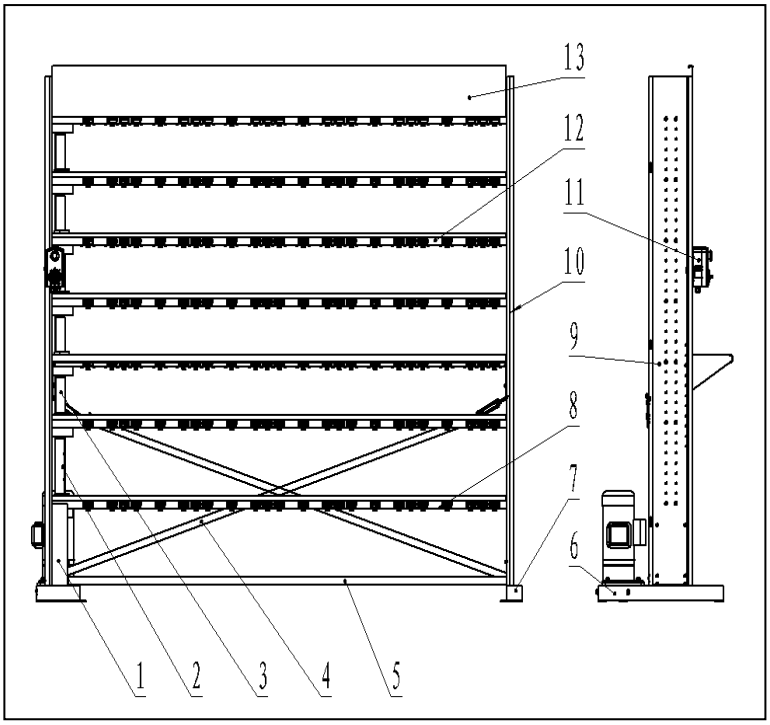
4） Check the power supply voltage frequency to see whether it is in line with the data on the nameplate of the equipment motor.

5） This manual is general for the PA series. The figures shown and the number of the cans might be different from your products. The installation procedures and usage methods are the same.

# 5. Setup

## 5.1 Spare Parts

01---Bottom Cover
02---Large Can Cover
03---Small Can Cover
04---Pulling Strip
05---Bottom Plate
06---Power Assembly
07---Right Mudsill
08---Large Can Shelves
09---Left Side Plate
10---Right Side Plate
11---Switch Box Assembly
12---General Shelves
13---Decorative Plate

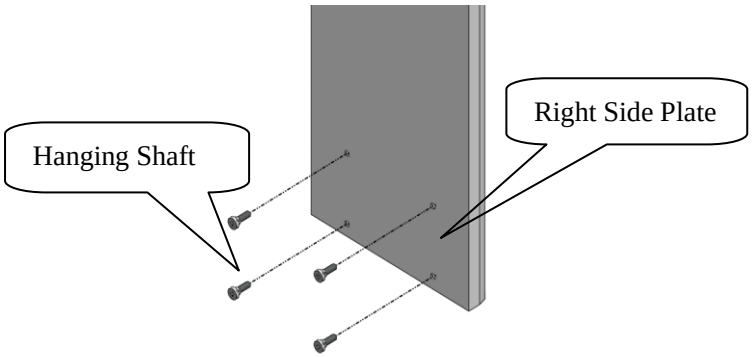



5.1.1

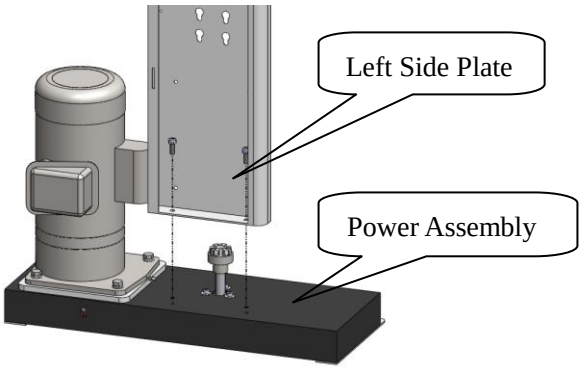
## 5.2 Setup Process

**1) Side Plate**

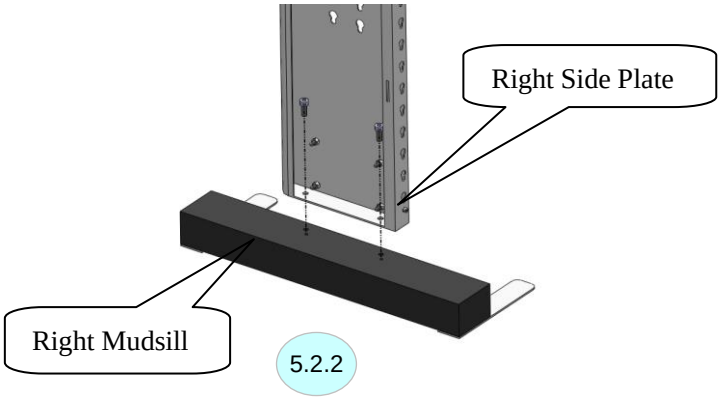
Rotate four P395 hanging shafts into the threaded holes of the right side plate (preparation). Use two M8X20 bolts to fix the left side plate on the power assembly (5.2.1). Use two M8X20 bolts to fix the right side plate on the right mudsill (5.2.2). The finished position is shown in 5.2.3. Notes: The power assembly and the right mudsill should be located in the predefined position or leaned against the wall. The mixing machine does not need relocation after installation.



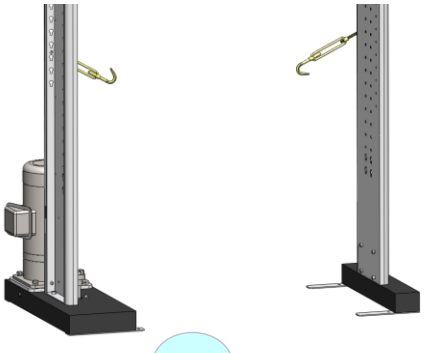

Preparation




5.2.1



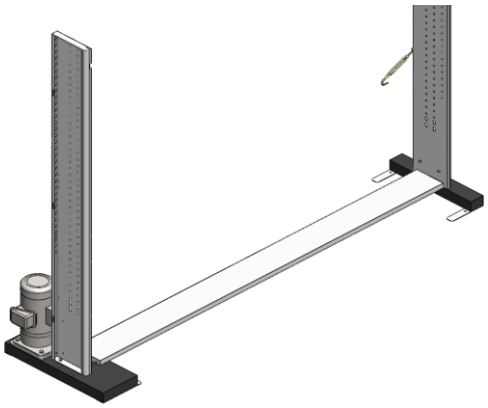

5.2.2



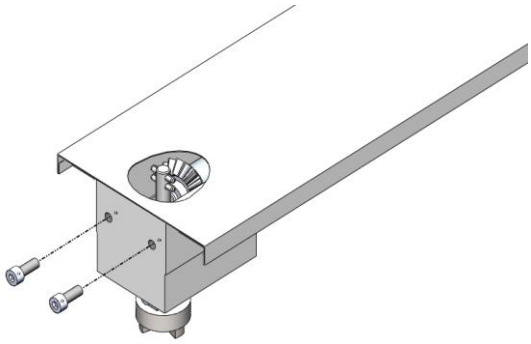
5.2.3

**2) Bottom Shelf Assembly**

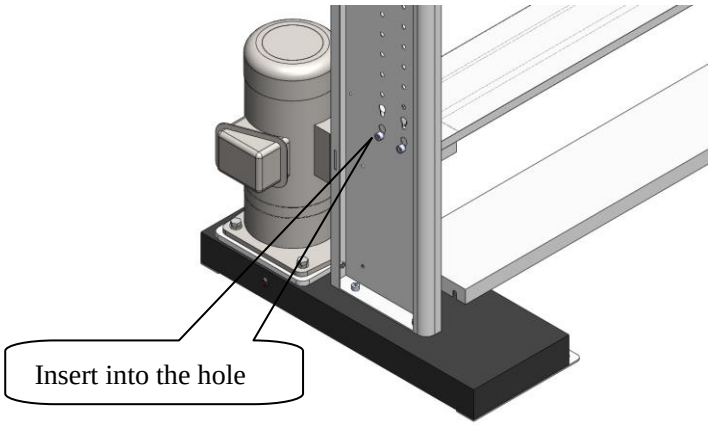
Put one end of the bottom plate on the power assembly and its other end on the right side plate (5.2.4). Fasten two M8X20 screws respectively on the two ends of the bottom shelf assembly (5.2.5). Insert the screws on the left of the bottom shelf assembly into the hole of the bottom plate of the side plate (5.2.6). Repeat for the right end (5.2.7).



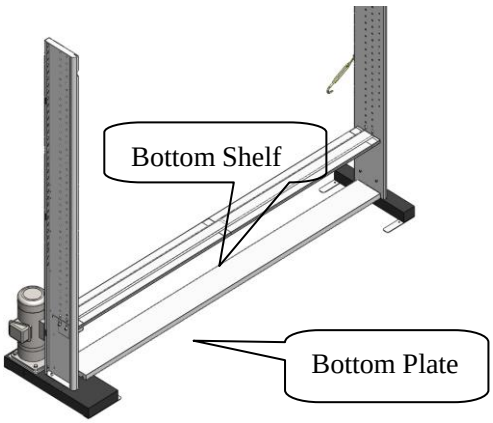
5.2.4



5.2.5



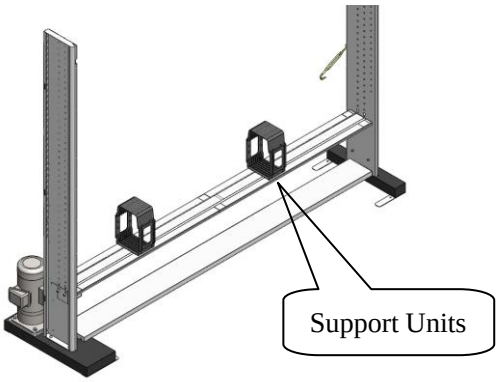

5.2.6



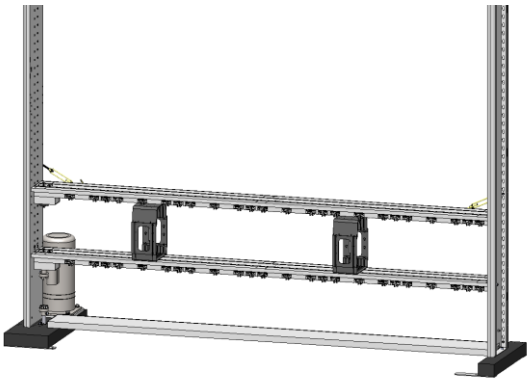

5.2.7

### 3) General Shelves Assembly

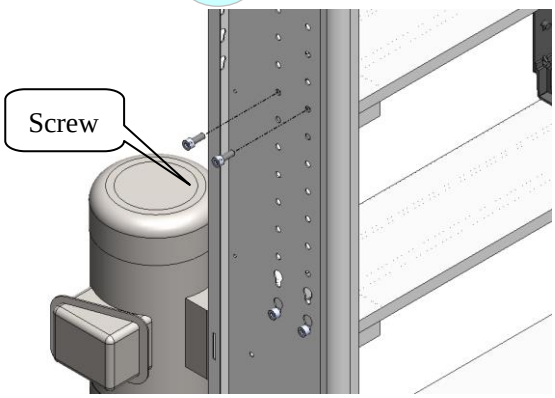
Put 2 sets of backing plate support units onto the bottom shelf (5.2.8) (Reference the *Adjustment of Backing Plate Support Units*). Put the general shelves assembly onto the backing plate support units (5.2.9). Use four M8X20 screws to fasten the shelves onto the holes of the left and right side plate assembly (5.2.10). Install the other general shelves in the same way (5.2.11).



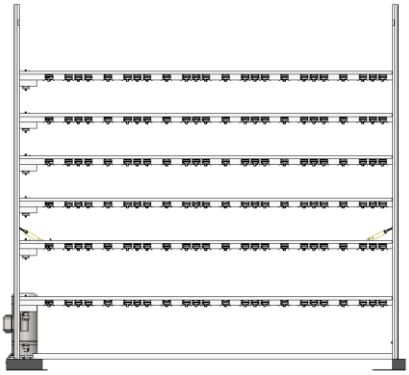

5.2.8



5.2.9

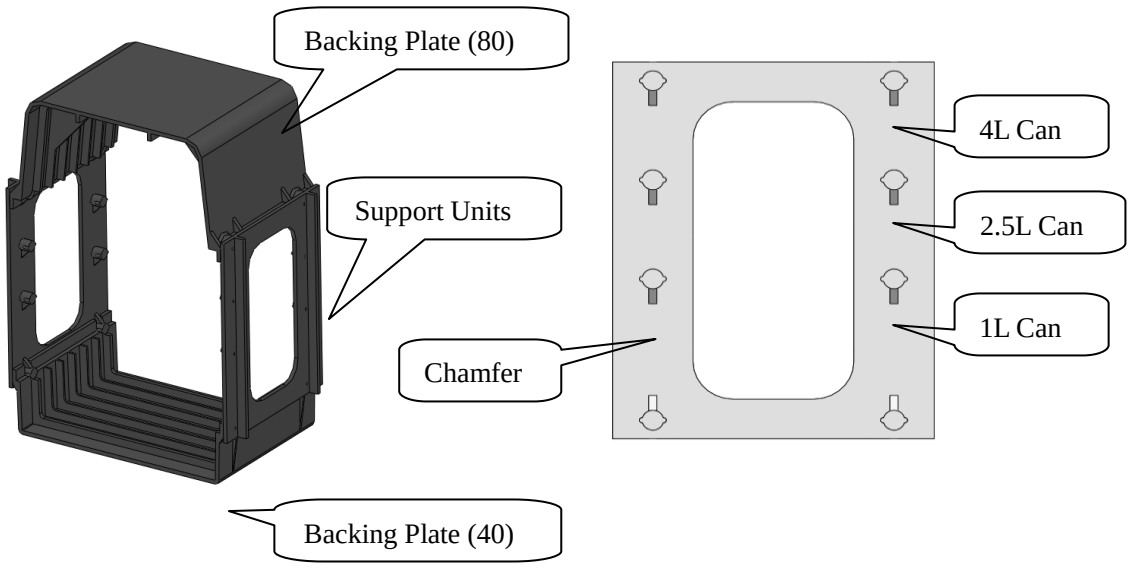



5.2.10



5.2.11

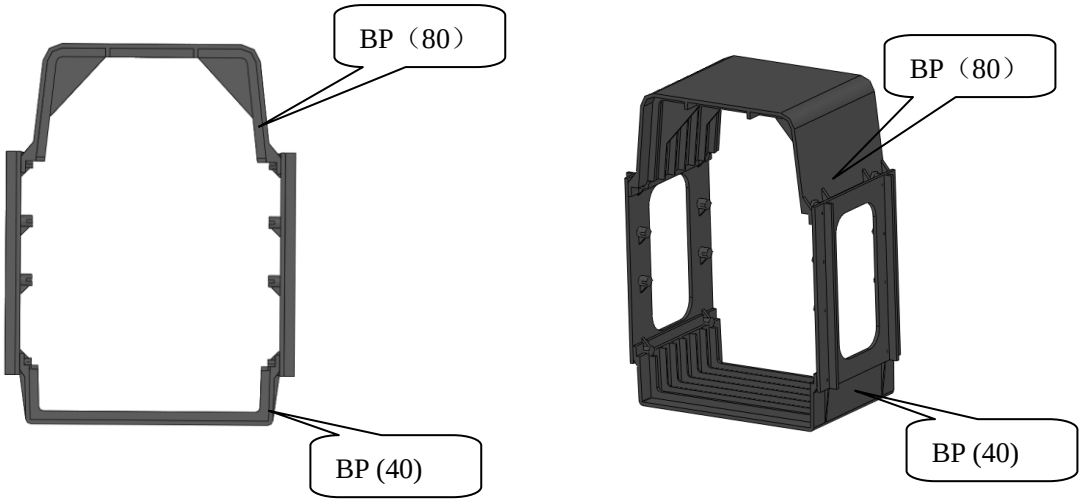
*Adjustment of Backing Plate Support Units*:



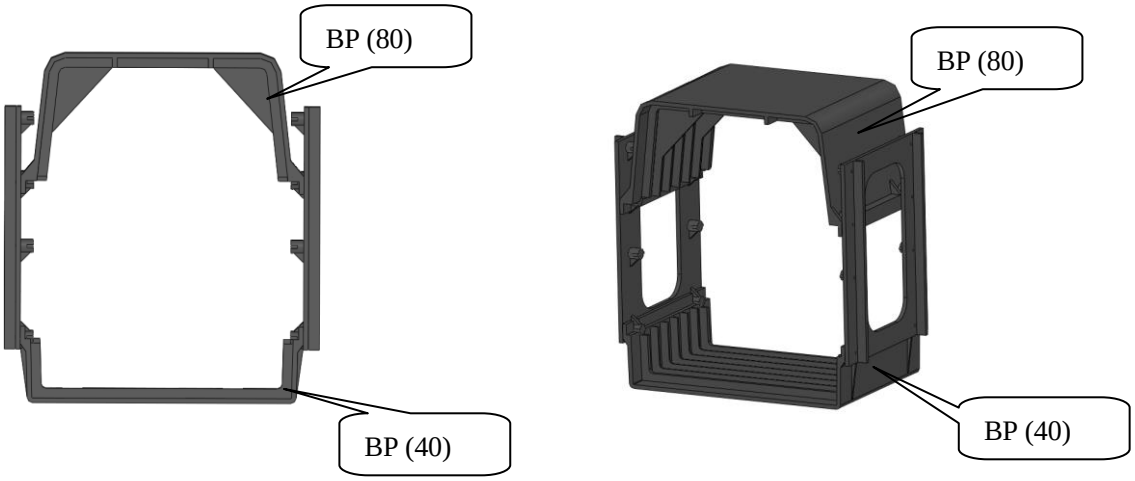
Standard Configuration：

BP = Backing Plate

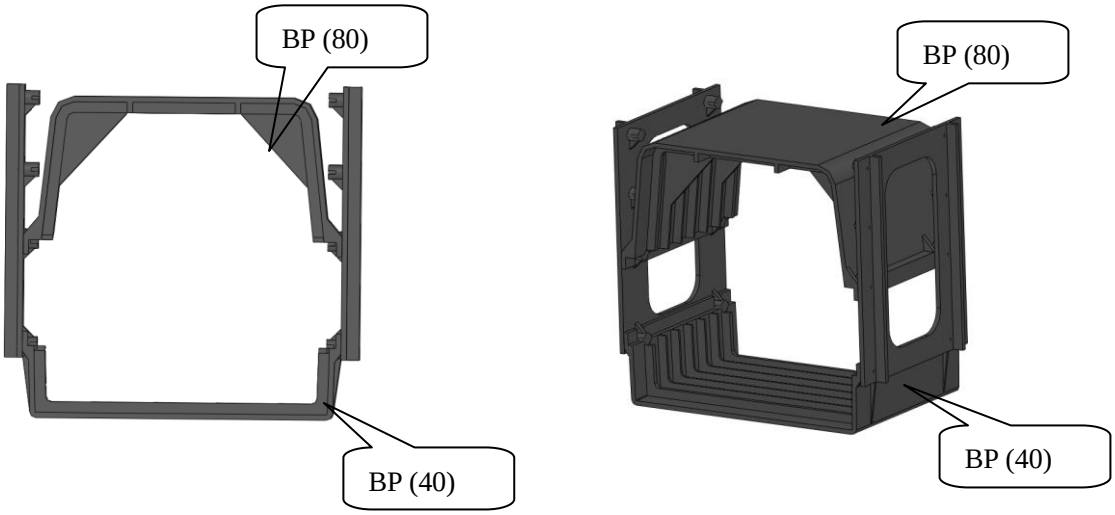
①**4L** Can：



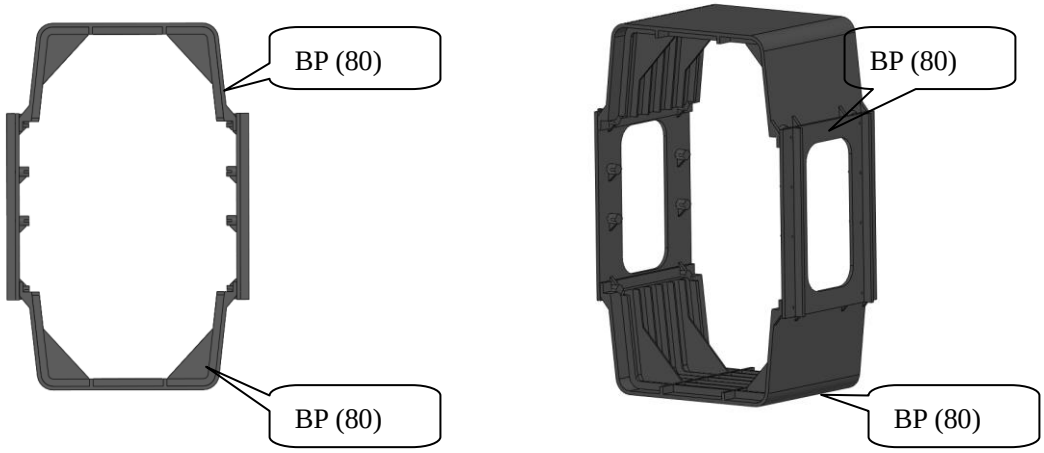

② **2.5L** Can：



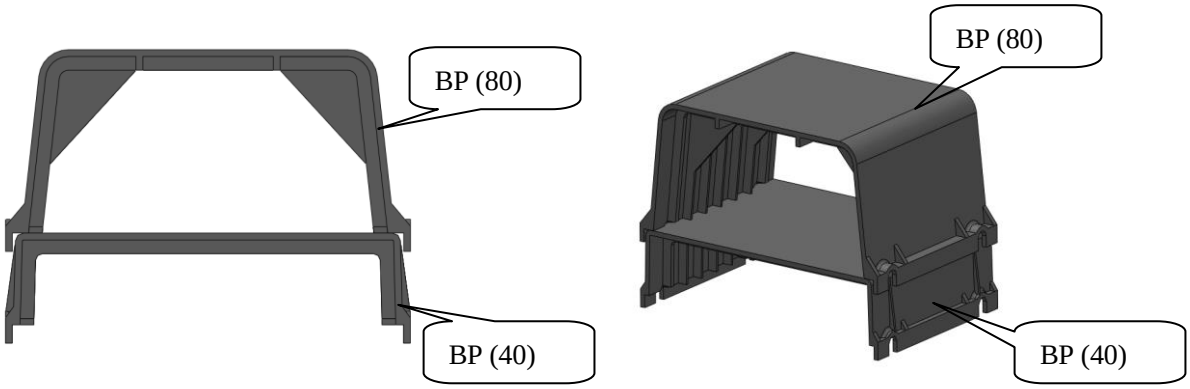

③ **1L** Can：



④ **5L** Can：

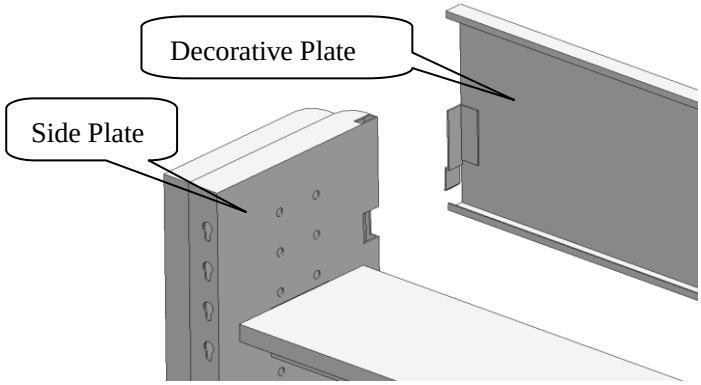



⑤ **0.5L** Can：

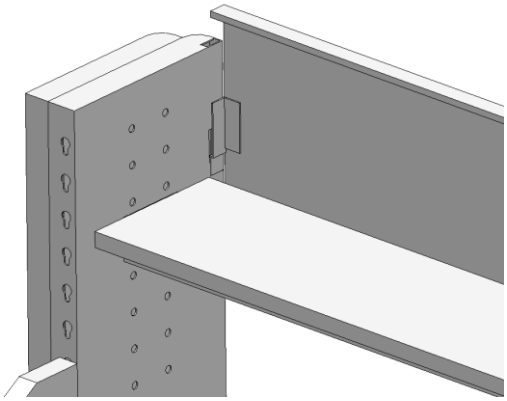



**4) Decorative Plate**

Hang the left/right hook of the decorative plate onto the side plate assembly (5.2.12, 5.2.13).



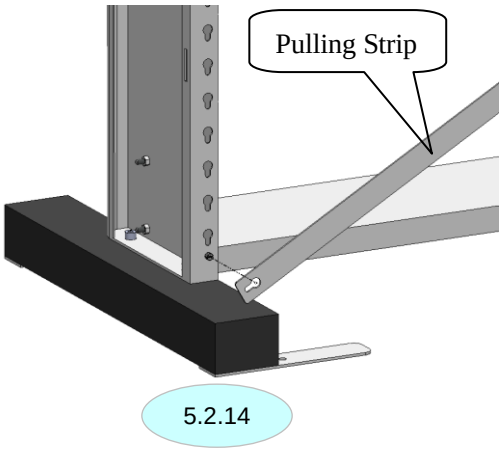

5.2.12



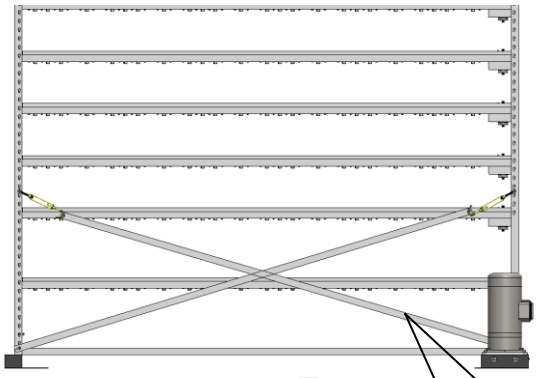
5.2.13

**5) Pulling Strip**

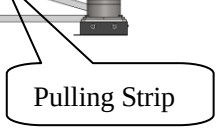
Hang the pulling strip on the hanging shaft of the side plate (5.2.14). Use the turn buckle to hook the hole on the pulling strip. Tension the pulling strip. Install the other pulling strip in the same way (5.2.15).




5.2.14

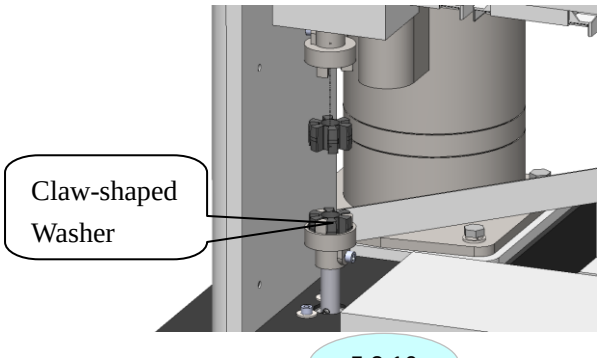


5.2.15

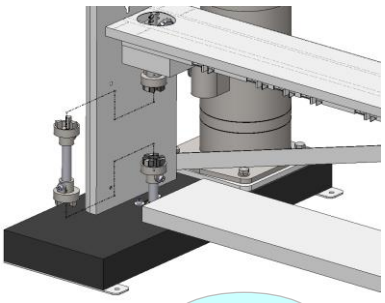



**6) Driving Link Rod**

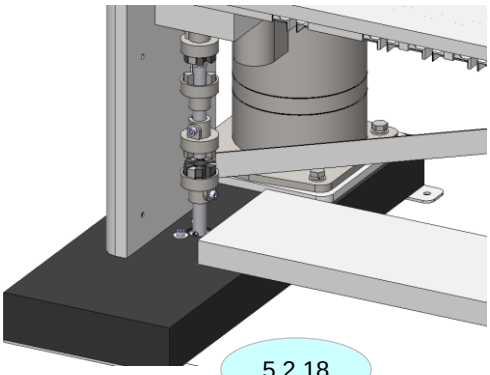
Install the claw-shaped washer into the bottom coupler (5.2.16). Place the driving link rod (with coupler and flat key) in the middle of the bottom shelves and driving assembly. Connect the coupler with the claw-shaped washers. Keep the two ends of the flat key level. Fasten the M6X12 bolt on the coupler (5.2.17, 5.2.18, 5.2.19).



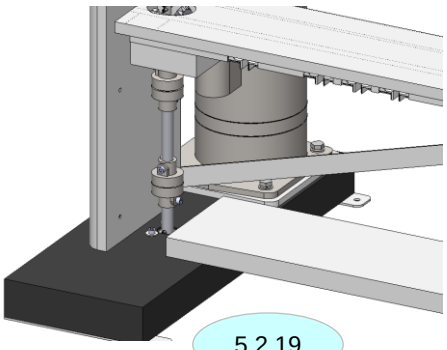

5.2.16



5.2.17



5.2.18



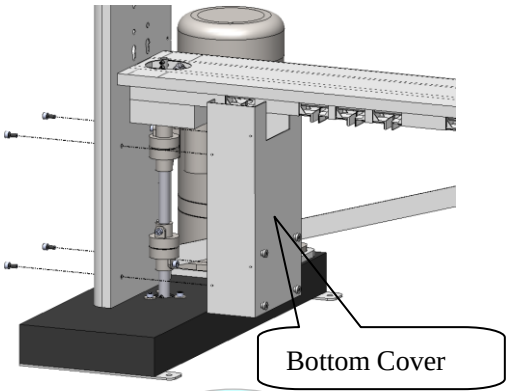
5.2.19

**7) Bottom Cover and Bottom Plate**

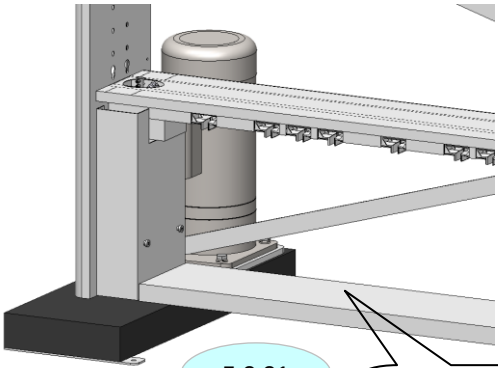
Use M6X12 screws to install the bottom cover into the four holes of the left side plate (5.2.20).

Hang the bottom plate on the bottom cover and the hanging shaft of the right side plate (5.2.21).

Rotate the turn buckle of the mixing machine. Tension the pulling strip. Side plates vertical to the ground.




5.2.20



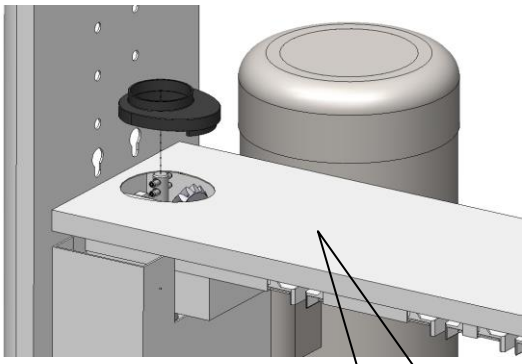

5.2.21

**8) Link Rod Assembly and Large/Small Can Cover**

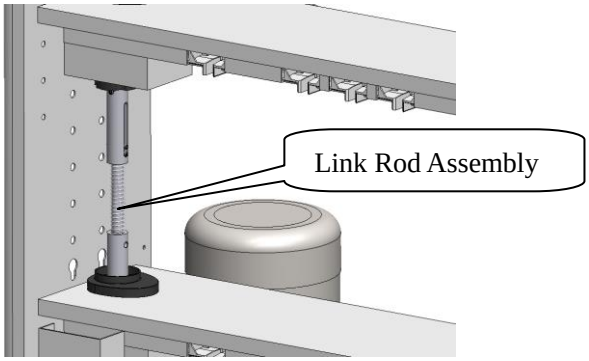
Get the supportive units into the link rod assembly (5.2.22). Fasten them on the 5X24 spring pin of the vertical drive shaft. The other end should be inserted into the shelf assembly shaft (5.2.23). Open the large/small can covers and use them to cover the link rod assembly by fastening them.

The length of the link rod should be in line with the spans.

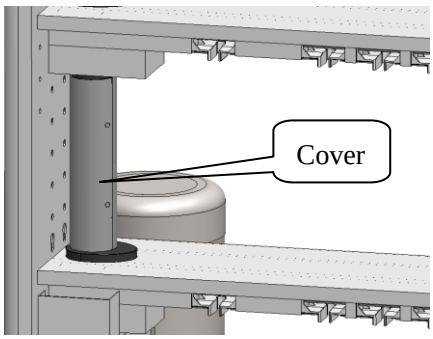
Cover the shelf support units and the end caps on the top shelf (5.2.24, 5.2.25).



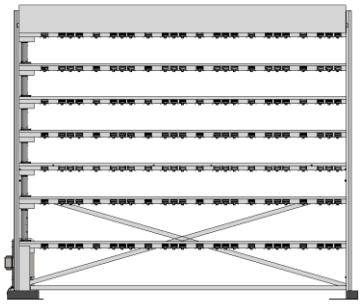

5.2.22




5.2.23




5.2.24



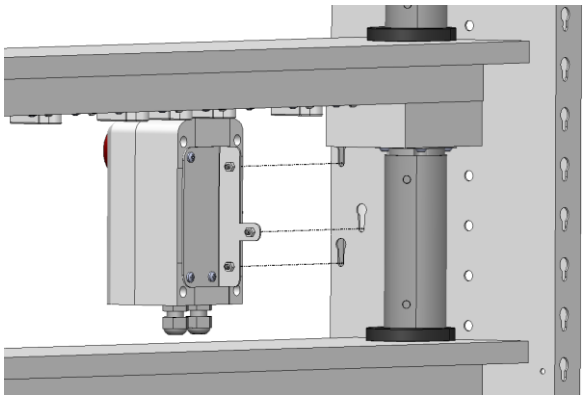
5.2.25

**9) Switch Box and Pilot Run.**

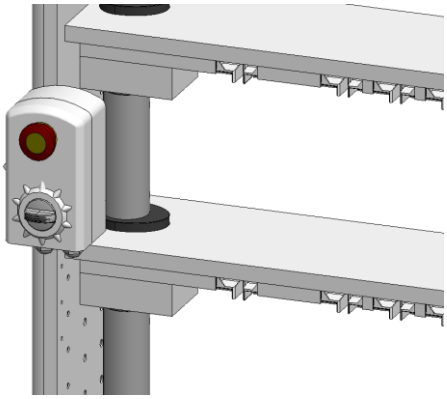
Insert the three fixing shafts of the switch into the three holes of the left side plate. Press them down to fasten the switch box onto the left side plate (5.2.26, 5.2.27).

Now the equipment has been assembled.

Connect the power supply (see the Usage section). Check the equipment during the operation. If there is any issue, solve it by referencing the Troubleshooting section.



5.2.26



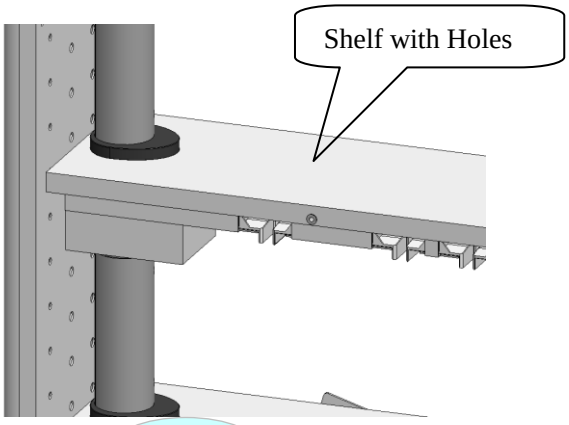
5.2.27

## 5.3 Installation Process of Optional Parts

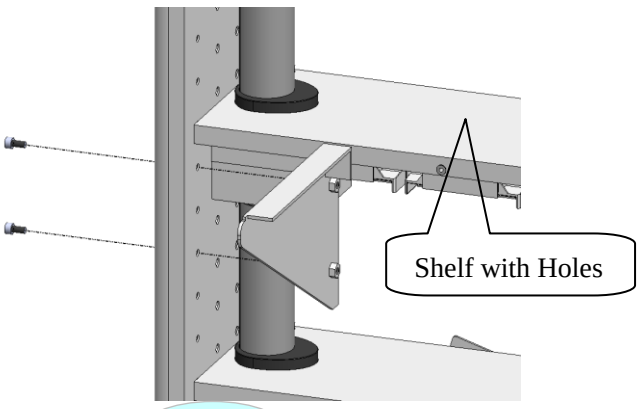
### 5.3.1 Platen

**Platen Installation**

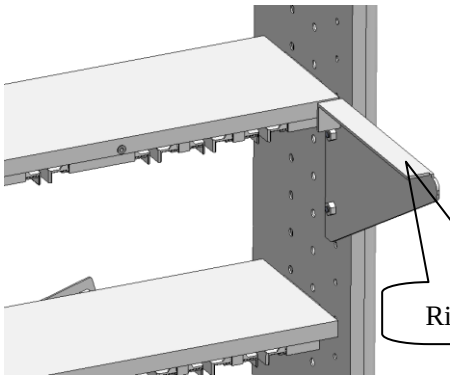
1. Place the shelf with holes on the shelf you intend to install the platen (5.3.1).
2. Use two bolts M6X12 and washers to fix the left fixing plate onto the holes of the left side plate (notice: the surface of the fixing plate and the shelf with holes should be leveled) (5.3.1.2).
3. Put the platen onto the left and right fixing plates. Use four bolts M4X8 to fix them to the shelves with holes (5.3.1.4).



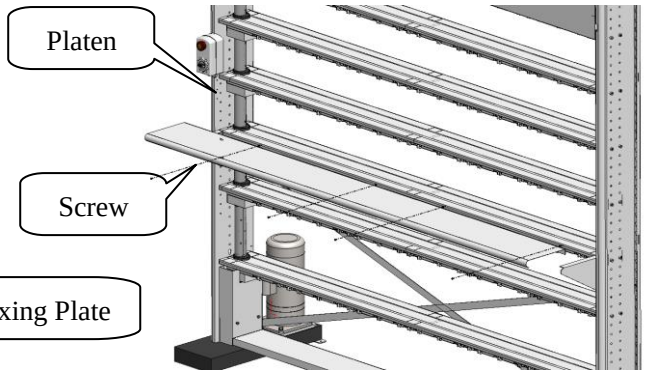

5.3.1




5.3.2



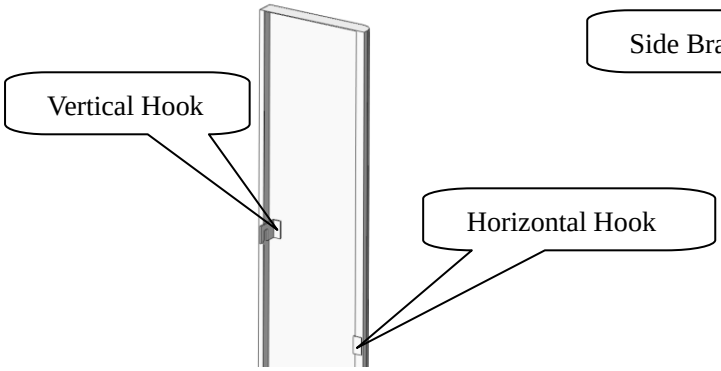

5.3.3



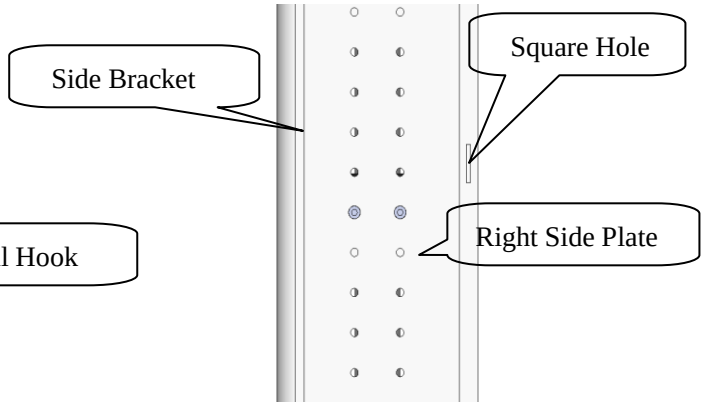

5.3.4

### 5.3.2 Left/Right Hanging Plate

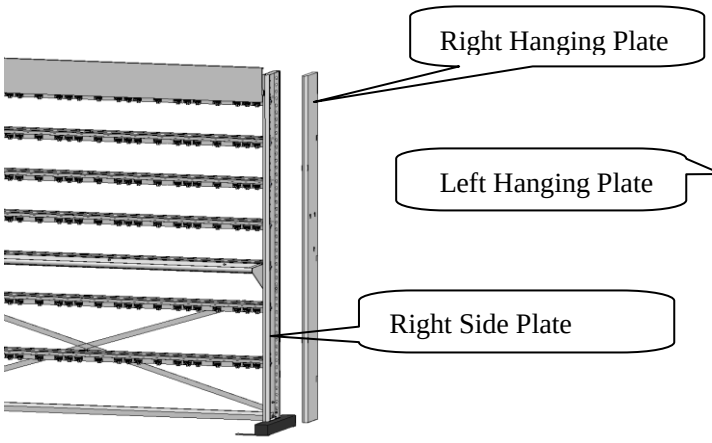
1. Use the horizontal hook on the right hanging plate to hook the side bracket of the right side plate. Use the vertical hook on the right hanging plate to hook the square hole of the right side plate. Push down the hanging plate to make it level with the bottom of the side plate (5.3.5, 5.3.6, 5.3.7).
2. Install the left hanging plate onto the left side plate by the same method (5.3.8).



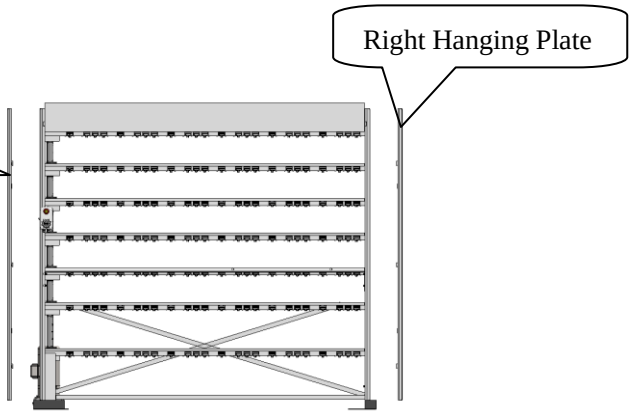

5.3.5




5.3.6



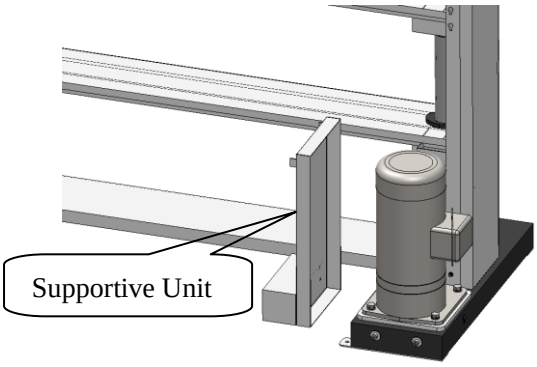

5.3.7



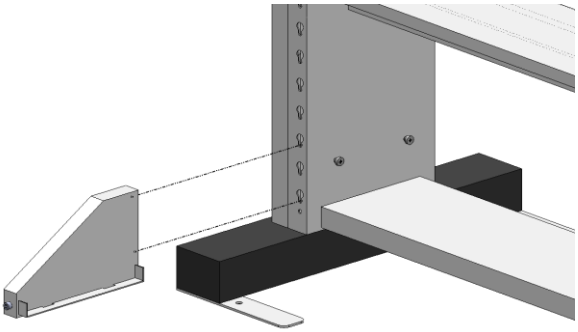

5.3.8

### 5.3.3 Back-storing Shelf and Mica Shelf

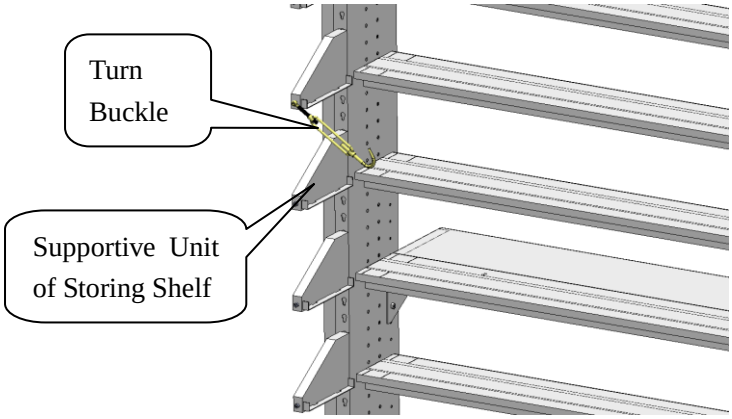
1. Place the supportive units of the back-storing shelf beside the motor (5.3.9), use two M6X12 screws to hang the back-storing shelf onto the holes to the left side plate (5.3.10). The surfaces of the back-storing supportive plates level with the relevant shelves. Install all the back-storing shelves in the same way (The left/right supportive units with turn buckles shall be leveled with the shelf at the 6th level) (5.3.11).
2. Insert the two bulging ends of the back-storing shelves into the slots of the back-storing supportive plates. The short one should be hung on the supportive units of the back-storing shelf. (5.3.12).
3. Connect one end of the pulling strip with the back-storing shelf supportive unit of the 3rd level. The other end should be connected with the turn buckle (5.3.13). Fix the supportive units with the back-storing shelves via M6X12 screws. Turn the buckle and tension the pulling strip (5.3.14).
4. Connect the mica mount and the mica shelf by M8X50 screws. Do not fasten the screws (5.3.15), fix them onto the relevant position of the right side plate (5.3.16).
5. Fasten all the screws.



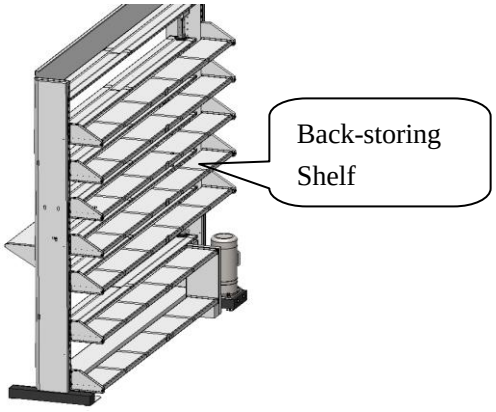

5.3.9



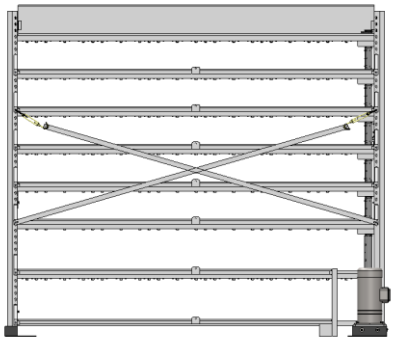
5.3.10



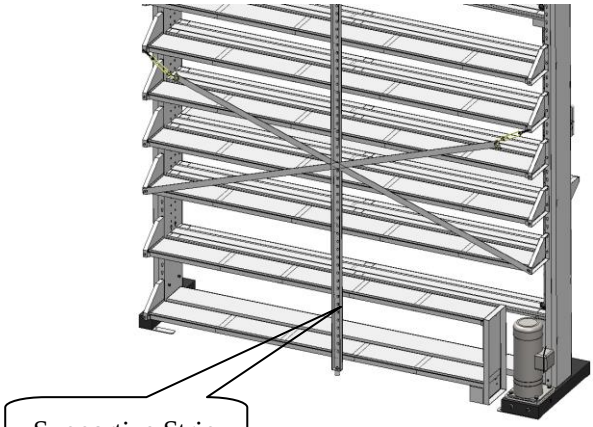

5.3.11



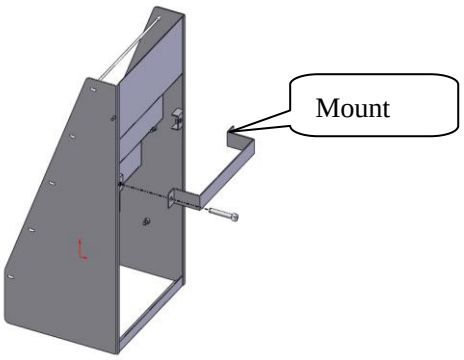

5.3.12



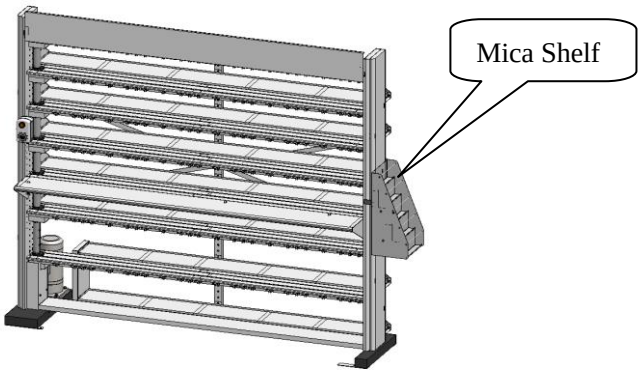
5.3.13




5.3.14




5.3.15




5.3.16

# 6. Usage

## 6.1 Check-up Before Usage

1) Check the local voltage, if it is the same with the nameplate, connect the power supply.

2) The can used should be in line with the equipment, do not use deformed cans.

3) Make sure the mixing lid is fastened prior to installing the cans on the shelf.

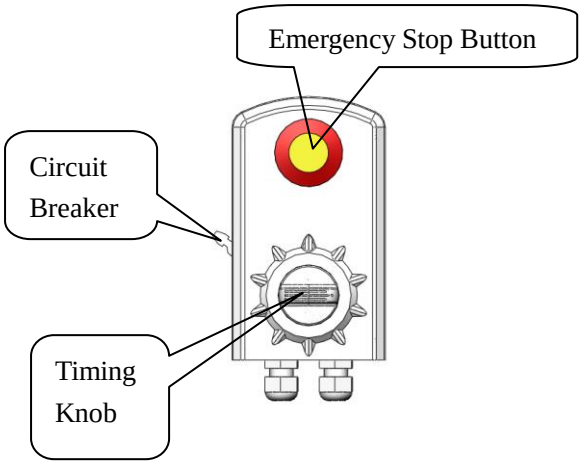
4) Make sure the paint is mixed prior to installation on the shelves one by one.

5) Mix the paint thoroughly prior to changing any paints.

6) Check the equipment thoroughly to see if there is any issue.

7) All the fixing parts should be fastened.

## 6.2 Operation




1) Connect the power supply, switch on the miniature breaker.
2) Rotate Timer Knob to set the mixing time. The longest time is 15 minutes. No sooner the enacted time exhausts, the machine will stop mixing automatically. If you want to stop the machine during its operation, you can rotate Timer Knob anti-clockwise to "OFF". Notice: if there is any abnormal noise during the pilot run, stop the machine and check it.

# 7. Troubleshooting

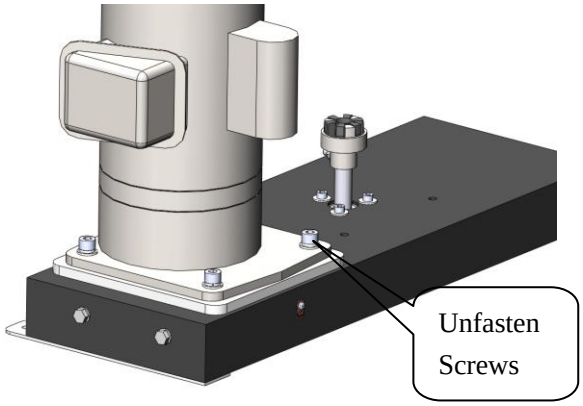
| Symptoms | Diagnosis | Troubleshooting |
|---|---|---|
| Motor does not work or is overloaded. | No power supply | Check the socket, the power cord, small circuit breaker or the fuse to ensure Switch Box has a charge. |
| | Switch Box issue | Replace Switch Box |
| | Voltage too low | Make sure if the voltage is located within the local voltage range ±5%; If not, equip with stabilizing transformer. |
| | Capacity is broken | Replace it |
| | Motor issue | Replace it |
| Motor is working, but reducer is not working. | Reducer is broken | Replace it |
| One mixing heads does not mix | Slotted Setscrew in plastic Cone-gear Assembly is damaged | Replace it (See "Repair") |
| Whole layer doesn't work. | Link Rod Assembly is broken | Replace it |
| Partial or the whole shelf doesn't work. | Sleeve tube or spring pin is broken. | Replace the sleeve tube or the spring pin. |

# 8. Repair

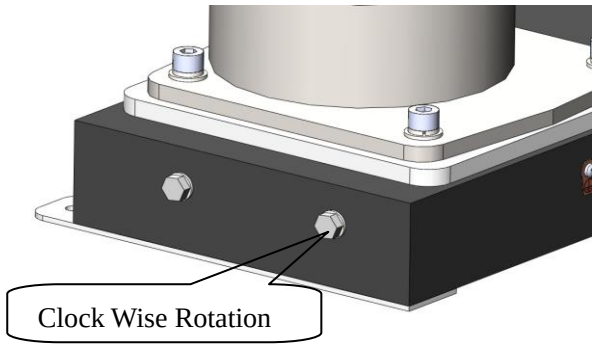
**All repairs & maintenances must be done after stopping the machine and unplugging the power supply. No repair & maintenance should be done without unplugging the power supply or during mixer operation.**

## 8.1 Tension the chain.

1） Unfasten the motor fixing screw (8.1.1).
2） Rotate the pulling bolt clockwise to tension the chain (8.1.2).
3） Fasten the motor fixing screw.



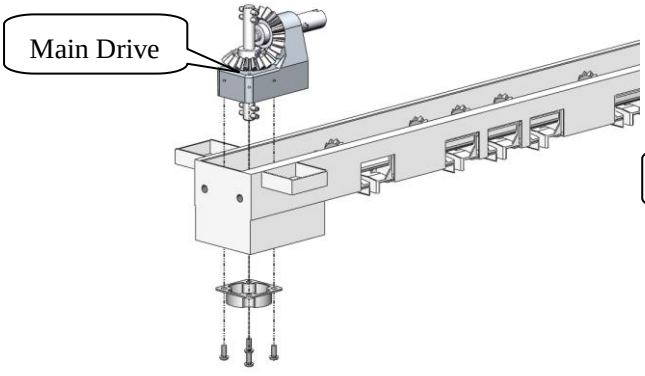

8.1.1



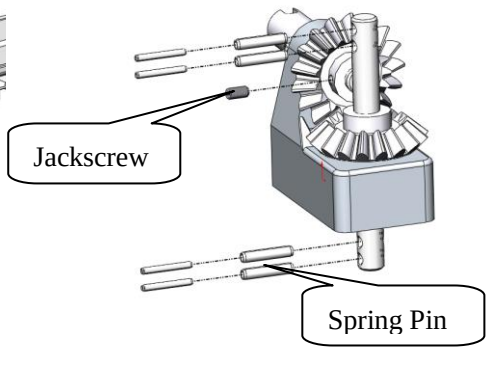

8.1.2

## 8.2 Replace the Spring Pin and Jackscrew.

1. Unscrew the fixing bolts by dismantling the driving shaft from the shelf assembly (8.2.1).
2. Hold the broken spring pin with steel column or iron nail. Knock it off with a hammer softly. Install a new one (8.2.2).
3. Dismantle the broken jackscrew and replace it with a new one (8.2.3).



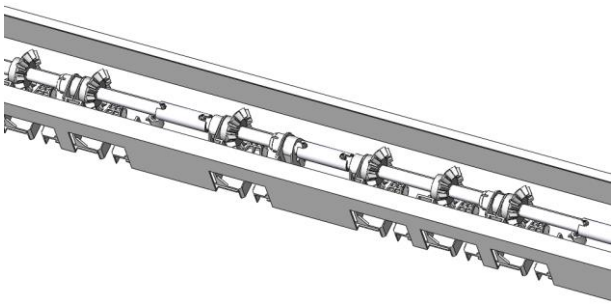

8.2.1



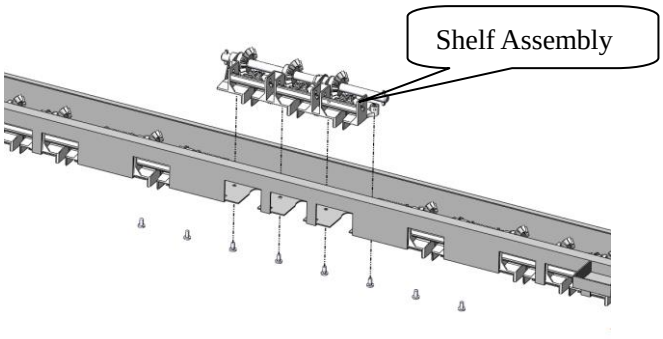

8.2.2

### 8.3 Replace the Plastic Cone-Gear Assembly

1. Dismantle the shelf to view the shelf assembly (8.3.1).
2. Dismantle the four fixing bolts of the broken shelf frame and the fixing bolts of the neighboring frame (8.3.2).
3. Pull upward the shelf assembly to dismantle it from the neighboring sleeve (8.3.2).
4. Replace it with a new shelf assembly, fasten all the bolts.



8.3.1




8.3.2

## 9. Maintenance

In order to keep the machine in optimum condition and reduce accidence, you should perform daily and periodical maintenance (Note: Be careful when performing maintenance).

### 9.1 Dalily Maintenance

Clean the machine and the paint leftover on cans and mixing lids (Stop the machine).

### 9.2 Periodical Maintenance

If the unit has a cyclical reducer, the lubricating grease should be filled after 3 months of usage. It is recommended to use the molybdenum disulfide or calcium base grease.

If the unit has a gear reducer, the lubricating maintenance is not a necessity.

### 9.3 Maintenance for extended period of no use.

1）Cut off the power supply.
2）Lubricate all parts of the machine.
3）Cover the machine.
4）Follow “6. Operation” when reusing the machine.

# 10.Nameplate

**ZHENGZHOU SANHUA TECHNOLOGY & INDUSTRY CO. LTD.**

ADD: Xushui Industrial & Trading Park, Zhongyuan West Road,

Zhengzhou City, Henan Province. PR. China. 450042

TEL：0371-67857220　After-Service：0371-67857319

FAX：0371-67857166　WEB：http://www.santint.com

E-mail:info@santint.com